

CLAIMS

What is claimed is:

1. A data storage system, comprising:

at least one module housing, said module housing having a front chamber and a rear chamber, said front and rear chambers running parallel to a front side of the module housing and extending across a width of the module housing;

an open shaft being arranged between the front chamber and the rear chamber, said shaft extending across the width of the module housing;

wherein said front chamber is adapted to receive at least two storage modules adapted to hold storage media,

wherein said rear chamber is adapted to receive at least one function module for the data storage media, and

at least one transfer unit arranged in the shaft, said transfer unit having a vertically traveling elevator and a carriage adapted to travel on the elevator between the front chamber and the rear chamber, said carriage having a grip mechanism for the data storage media.

2. The system in accordance with claim 1, wherein the shaft is open on its upper side and its lower side so that an integral open shaft is created through all module housings when two or more module housings are stacked on top of one another.

3. The system in accordance with claim 1, wherein the shaft has vertical guides on both sides to guide the elevator.

4. The system in accordance with the claim 2, wherein the guides of the two module housings are in vertical alignment for at least one elevator when two module housings are stacked on top of one another so that said at least one elevator can travel continuously vertically in the connecting shafts of the stacked module housings.

5. The system in accordance with claim 1, wherein the storage modules comprise disk magazines for CDs and/or DVDs.
6. The system in accordance with claim 5, wherein the function modules comprise at least one disk drive.
7. The system in accordance with claim 6, wherein the function modules comprise a flipper and/or a CD burner and/or a printer.
8. The system in accordance with claim 1, wherein at least two module housings are stacked on top of one another, one of said module housings having at least one function module in the rear chamber and at least one other module housing having storage modules in the front chamber and the rear chamber.
9. The system in accordance with claim 1, wherein said module housing is adapted to be integrated into a 19-inch rack.
10. The system in accordance with claim 3, wherein the elevator comprises an electrical motor adapted to drive pinion gears, said pinion gears being adapted to engage into vertical racks arranged continuously vertically on sidewalls of the module housing so the elevator can travel vertically.
11. The system in accordance with claim 1, wherein the power supply and the control of the transfer unit are wireless.
12. A data storage system, comprising:
  - a front chamber adapted to receive one or more modules;

a rear chamber adapted to receive one or more modules, said rear chamber being substantially parallel to said front chamber and being spaced apart from said front chamber, thereby forming an open shaft between said front chamber and said rear chamber; and

at least one transfer unit arranged in said open shaft, said transfer unit having an elevator adapted to travel along a first axis, and a carriage adapted to travel on the elevator along a second axis, said carriage having a grip mechanism adapted to grip data storage media.

13. The system according to claim 12 wherein at least one of said rear chamber comprises at least one function module.

14. The system according to claim 12 wherein at least one of said front chamber comprises at least one data storage module, said data storage module being adapted to store data storage media.